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NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
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STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Kenny C. Guinn, Governor
Allen Biaggi, Director
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November 4, 2008

Mr. Joe Kelly
Montrose Chemical Corporation of California (Montrose)
600 Ericksen Avenue NE, Suite 380
Bainbridge Island, Washington 98110

RE: Nevada Division of Environmental Protection Response to:
Additional DNAPL Reconnaissance Borings Data Submittal Report Former Montrose Facility Montrose Chemical Corporation of California, Henderson, Nevada
Dated October 9, 2008

NDEP Facility ID # H-000540

Dear Mr. Kelly:

The Nevada Division of Environmental Protection (NDEP) has reviewed this report and finds that it is acceptable with the following observations noted for the Administrative Record and for use in the development of future Deliverables:

1. General comment, it is the understanding of the NDEP that the conclusions presented in the subject document are "preliminary". It is the NDEP's expectation that this information will be incorporated in the various Deliverables that are forthcoming regarding the evaluation of groundwater and DNAPLs (e.g.: sub-area specific conceptual site model and remedial alternatives study).
2. General comment, throughout the document Montrose compares groundwater concentrations to a 5% of solubility metric. It is noted that this 5% value has no basis based upon the NDEP's review of available guidance. If there is a reference it should be provided. If there is not a reference the USEPA (1992) 1% of solubility metric should be utilized.
3. General comment, it is expected that future Deliverables will also consider DNAPL data generated by adjacent parties (e.g.: Basic Remediation Company and Stauffer Management Company).
4. Page ES-1, 1st paragraph, next to the last sentence. NDEP notes that this sentence should have read (emphasis added): "This evidence is not considered sufficient to indicate the presence of DNAPL *at the locations of these soil borings and monitor wells*."
5. Page ES-1, 1st paragraph, penultimate sentence. The USEPA (1992) does consider the presence of soluble phase DNAPL at 1% of the solubility limit as indicative of DNAPL.
6. Sections 2.1 through 2.3, Montrose's discussions of the data are inconsistent. For example, each data point that is discussed should cover the same level of detail. For example, PID, FID, FLUTe ribbon, and visual evidence are not uniformly discussed for each location. This information could likely be summarized concisely in a table.

7. Section 2.3.2, page 9, regarding well AA-MW-20, the elevated PID reading at 105 feet below ground surface should be discussed further and additional investigation may be necessary. The elevated reading is generally consistent with the soil horizon that DNAPL is found in. In addition, the groundwater data from this well (constructed above this horizon) contains the highest concentrations of all of the wells presented on Table 6 (Groundwater Data Collected Summer 2008). The data for location RB-08 should be considered relative to the data for location AA-MW-20 and this may provide some insight regarding additional evaluations in this area. It is expected that Montrose will address this issue in the area-specific Deliverables that are being prepared for the Closed Ponds Area and for groundwater/DNAPL.
8. Section 3.3, page 17, given the difficulties that Montrose has described regarding DNAPL monitoring, this section does not sufficiently address how the future monitoring will be conducted to optimize the detection of DNAPLs, *i.e.*, discuss methods and procedures.
9. Tables, general comment, please note that the referenced USEPA Region VI metrics are "Medium-Specific Screening Levels (MSSLs)" not "Preliminary Remediation Goals". Please correct this reference in all future Deliverables.
10. Table 4, the values in this table need references.
11. Table 6 should have included columns with the Maximum Contaminant Levels (MCLs) and the MSSLs listed for all reported parameters.
12. Figure 2, the Percent Water Solubility (Maximum) map. NDEP notes that, in the Alluvial aquifer (Aa), the highest calculated percentage solubility of some of the considered contaminants (i.e., benzene, chlorobenzene, 1,2-dichlorobenzene (DCB), 1,4-DCB, and chloroform) exceeded 15% in wells/borings EC-03, EC-06, EC-07, B-07, B-04, B-03, P-19, MW-03, and FTF-07D, and exceeded 5% in wells/borings AA-MW-13, FTF-11D, B-06, and numerous other downgradient locations. All these locations are outside the area marked on Figure 2 as the estimated extent of dense non-aqueous phase liquids (DNAPL). Based on this observation, it is likely that DNAPL may be present outside the area marked on Figure 2 as the estimated extent of DNAPL in the alluvial aquifer.
13. Figure 3, the NDEP has the following comments:
    a. The Percent Water Solubility (Maximum) map. NDEP notes that, in the fine-grained Upper Muddy Creek Formation (UMCf-fg), the highest calculated percentage solubility of one of the considered contaminants exceeded 15% in wells MC-MW-11, RB-11/MC-MW-18 and MCF-BW-08, and exceeded 5% in AA-MW-20 and RB-10/MC-MW-17, all of which are located outside the area marked on Figure 3 as the estimated extent of DNAPLs in UMCf. Based on this observation, it is likely that DNAPL may be present outside the area marked on Figure 3 as the estimated extent of DNAPL in UMCf-fg.
    b. Based upon the evidence presented on this Figure, it appears that an additional DNAPL boring/well should be considered east of location MC-MW-12 and south of location MC-MW-18. Groundwater data in well MC-MW-18 exceeds 15% of its respective water solubility and location MC-MW-12 shows visual evidence of DNAPL being present.
14. NDEP does not request that Figures 2 and 3 be revised at this time. However, similar maps revised to include a more conservative interpretation of DNAPL evidence associated with the very high levels of dissolved contaminants will be required in future Deliverables, including the forthcoming report for sampling of Tronox wells to define the eastern extent of the plume of contaminants.

Reference

EPA. 1992. *Estimating Potential for Occurrence of DNAPL at Superfund Sites*. OSWER Publication 9355.4-07FS. National Technical Information Service (NTIS) Order Number PB92-963338CDH.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Maria B. Skorska, Ph.D., P.E.
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